

LISTING OF CLAIMS

1(CURRENTLY AMENDED). A digital camera module, comprising:

a barrel having external threads on an external surface thereof, with one or more lenses set in the barrel, and ~~an~~ a magnetic assembling plate mounted to an upper surface of the barrel;

a camera module housing assembled with the barrel, the housing having an internally threaded opening through which the barrel is mounted to the housing;

an image sensor converting an image of a subject into an electrical image signal; and

a substrate having an electronic circuit, with the image sensor installed on the substrate.

2(CURRENTLY AMENDED). The digital camera module according to claim 1, wherein the assembling plate is made of ~~a magnetic material or~~ a metal sheet which is magnetically attracted to a magnet.

3(CURRENTLY AMENDED). The digital camera module according to claim ~~[[2]]~~ 1, wherein the assembling plate is provided with a baffle ~~[[so as]]~~ arranged to prevent an incidence of undesired light beams to the lenses of the barrel.

4(ORIGINAL). The digital camera module according to claim 2 or 3, wherein the assembling plate is provided with a plurality of tool holes so as to hold the barrel during a process of assembling the barrel with the housing.

5(CURRENTLY AMENDED). The digital camera module according to claim 1, wherein the assembling plate is attached ~~[[mounted]]~~ to the upper surface of the barrel ~~[[through a bonding technique]]~~, by ~~[[use of]]~~ an adhesive.

6(WITHDRAWN). A method of assembling a digital camera module, comprising:

holding a plurality of barrels, each having a magnetic assembling plate, in a jig having a first magnet;

assembling one or more lenses in each of the barrels held in the jig so as to align the lenses in the barrel;

attaching each of the barrels having the lenses to an assembling handler having a second magnet; and

assembling each of the barrels to a camera module housing by manipulating the assembling handler.

7(WITHDRAWN). The method according to claim 6, further comprising:

measuring a lens alignment after the lenses are assembled in each of the barrels.

8(WITHDRAWN). An apparatus for assembling a digital camera module, comprising:

a jig having a first magnet to hold a plurality of barrels each having a magnetic assembling plate at an end thereof; and

an assembling handler having a second magnet at an end thereof to be magnetically attached to the magnetic assembling plate of each of the barrels, the assembling handler being manipulated to assemble the barrel with a camera module housing.

9(WITHDRAWN). The apparatus according to claim 8, wherein the jig has a plurality of barrel holding holes arranged in a line so as to hold the barrels such that a part of each of the barrels is seated in each of the barrel holding holes, with the first magnet placed at bottom surfaces of the barrel holding holes.

10(WITHDRAWN). The apparatus according to claim 8, wherein the assembling plate of each of the barrels is provided with a tool hole, and the second magnet of the assembling handler has an engaging projection to be inserted into the tool hole of the assembling plate.

11 (NEW). The digital camera module of claim 1 wherein said assembling plate is provided with a plurality of tool holes to hold the barrel while the barrel is attached to the housing.

12(NEW). A digital camera module comprising:
a barrel having a top surface;
a lens set in the barrel;
a tubular camera module holding said barrel; and
a substrate having image sensor disposed thereon, with said module being attached to said substrate in a position selected to allow an image to be focused by said lens unto said image sensor;
wherein said barrel includes a baffle arranged and constructed to prevent the incidence of undesirable light beams on said lens.

13. (NEW) The digital camera module of claim 12 wherein said barrel has a cylindrical shape with one end forming said top surface.

14 (NEW). The digital camera module of claim 13 wherein said baffle has a disc shaped body with a central opening.

15 (NEW). The digital camera module of claim 14 wherein said central opening has a sidewall has an inner sidewall having at least a first diameter and a second diameter bigger then said first diameter.

16 (NEW). The digital camera module of claim 12 wherein said barrel comprises a magnetic assembling plate on said top surface, said magnetic assembling plate being used to hold said barrel during assembly.

17 (NEW). A digital camera module comprising:
a barrel having a top surface;
a lens set in the barrel;
a tubular camera module holding said barrel; and
a substrate having image sensor disposed thereon, with said module being attached to said substrate in a position selected to allow an image to be focused by said lens unto said image sensor;
wherein said barrel includes a mounting plate attached to said top surface for selective manipulation of said barrel.

18 (NEW). The digital camera module of claim 17 wherein said mounting plate is disc-shaped.

19 (NEW). The digital camera module of claim 17 wherein said mounting plate is formed with a plurality of holes sized and shaped for gripping by a tool.

20 (NEW). The digital camera module of claim 17 wherein said mounting plate is made of one of a magnetic and a ferromagnetic material for engagement by a magnetic tool for the manipulation of the barrel.